REMARKS

The present invention is a receiver for receiving a multi-carrier signal conveying data and reference signals having a first and a second diversity branch each operable to extract the data and the reference signals and a method of receiving a multi-carrier signal conveying data and reference signals at a receiver having a first and a second diversity branch each operable to extract the data and reference signals from the multi-carrier signal.

The Examiner's indication that claims 5, 6, 8-11, 19, 20 and 22-25 are objected to but would be allowable if rewritten in independent form is noted with appreciation. Newly submitted claims 30-43 correspond to the subject matter to which the Examiner has objected with claim 30 corresponding to claim 5, claim 31 corresponding to claim 6, claims 32-35 corresponding to claims 8-11, claim 36 corresponding to claim 19, claim 37 corresponding to claim 20, claim 38 corresponding to claim 22 and claims 39-43 corresponding to claims 23-27.

Claims 1-4, 14-18, 21 and 27 stand rejected under 35 U.S.C. §102 as being anticipated by United States Patent 6,151,372 (Yamamoto). This ground of rejection is traversed with respect to claims 3, 4, 17 and 18.

Claims 3 and 17 substantively recite a receiver and a method of receiving a multi-carrier signal including determining an estimation of the reliability of an extracted reference signal from each set of extracted reference signals wherein the estimation of the reliability of each set of extracted reference signals is provided by a process of calculation using an adjacent reference signals for each set of extracted reference signals. Claims 1 and 15 have been amended to incorporate this subject

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matter. Furthermore, claims 4 and 18 further limit claims 1 and 15 in reciting that the number of adjacent reference signals used in the calculation is between 1 and 7. This subject matter has no counterpart in Yamamoto.

Yamamoto discloses a diversity receiver which includes a diversity processing unit 60 which combines orthogonally detected signals which are detected by a receiver and processed to include processing by Fourier transform circuits 50a and 50b. The Fourier transform circuits 50a and 50b are disclosed in Fig. 2 as being subject to a complex multiplication provided by functions 63a and 63b and further combined by a wave combiner 64. Column 5, lines 7-44, of Yamamoto describe the aforementioned process which is described as utilizing "wave amplitude characteristic comparator 65 for providing a selection for selecting a signal received through a propagation path existing a high amplitude for each subcarrier based on propagation path characteristic $H_1(\omega)$ estimated at propagation path characteristic determining sections 61a and 61b followed by selecting a signal received through the propagation path exhibiting a high amplitude for the signals provided from Fourier transform circuits 50a and 50b for each subcarrier based on the selection signal provided from the wave amplitude characteristic comparator 65 to output the selected signal." This processing does not meet the subject matter of claims 1, 4, 15 and 18.

Moreover, there is no basis in the record why a person of ordinary skill in the art would be led to modify the teachings of Yamamoto to arrive at the subject matter of claims 1, 4, 15 and 18 except by impermissible hindsight.

Claims 1-4 and 15-18 stand rejected under 35 U.S.C. §102 as being anticipated by United States Patent 6,654,429 (Li). These grounds of rejection are

likewise traversed with respect to claims 1, 4, 15 and 18. Li discloses a diversity receiver in Fig. 2 which includes a channel estimator 126 which estimates channel parameters and a diversity combiner 128. See column 3, lines 41-67, through column 4, lines 1-29, of Li. Moreover, Figure 3 contains a block diagram of the channel estimator 126 which is described in column 4, lines 35-67, through column 5, lines 1-5. However, this disclosure does not teach estimation of the reliability of each set of the extracted reference signals by a process of calculation using adjacent reference signals for each set of extracted reference signals as recited in claims 1 and 15 and further that the number of adjacent reference signals is between 1 and 7 as recited in claims 4 and 18.

Moreover, there is no basis why a person of ordinary skill in the art would be led to modify the teachings of Li to arrive at the subject matter of claims 1, 4, 15 and 18 except by impermissible hindsight.
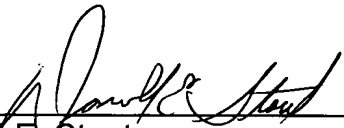
In view of the foregoing amendments and remarks, it is submitted that each of the claims in the application is in condition for allowance. Accordingly, early allowance thereof is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 C.F.R. §1.136. Please charge any shortage in fees due in connection with the

filing of this paper, including extension of time fees, to Deposit Account No. 01-2135

(0171.40292X00) and please credit any excess fees to such Deposit Account.

Respectfully submitted,

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Attachments

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